

A background image showing two students. On the left, a man with glasses and a beard is looking thoughtfully to the side. On the right, a woman is looking down at a laptop screen. The image has a blue and green color overlay.

University  
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## Climate change and & International Law

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# Context: Climate Change and Sustainable Development Goal 13

## Goal 13 – Climate action as part of the 2030 Agenda for Sustainable Development

‘Climate change is now affecting every country on every continent. It is disrupting national economies and affecting lives, costing people, communities and countries dearly today and even more tomorrow. Weather patterns are changing, sea levels are rising, weather events are becoming more extreme and greenhouse gas emissions are now at their highest levels in history. Without action, the world’s average surface temperature is likely to surpass 3 degrees centigrade this century. The poorest and most vulnerable people are being affected the most.’

→ Legal Action?



## IPCC AR5 Working Group One [WG1] 2013

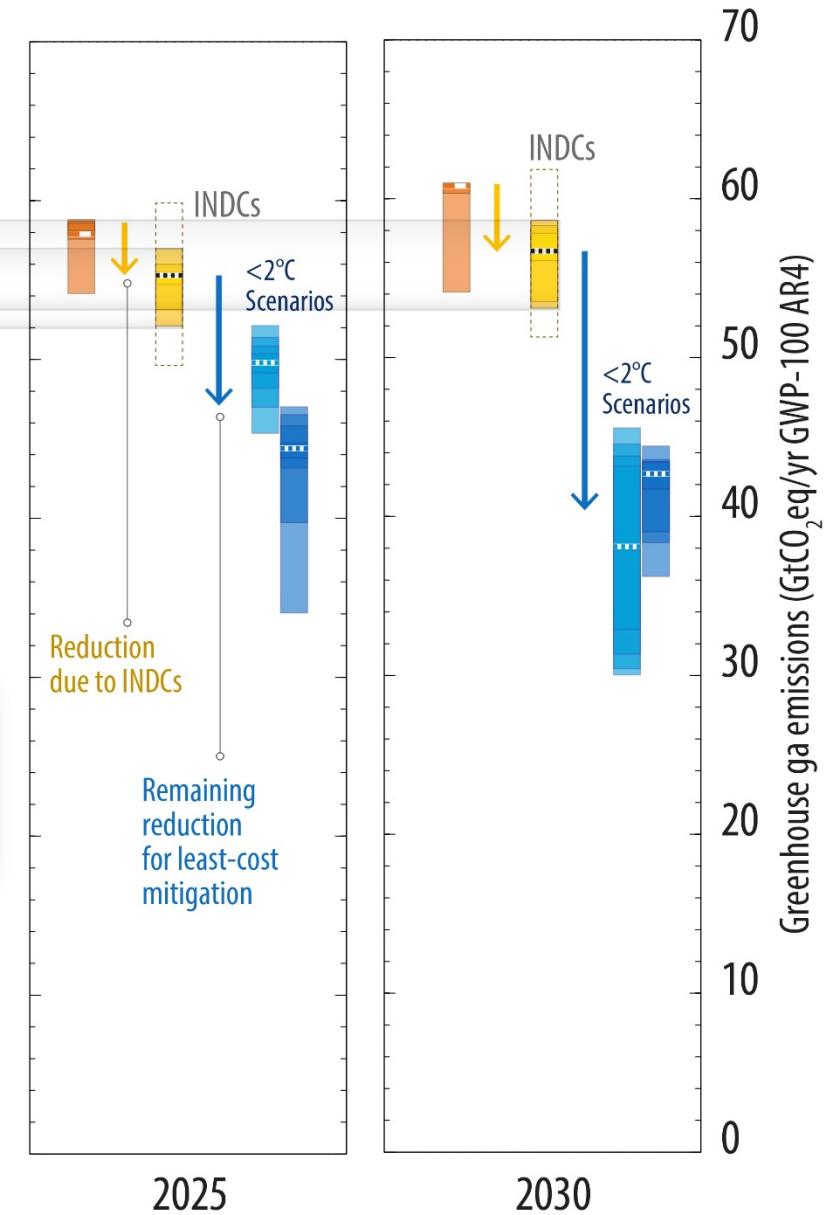
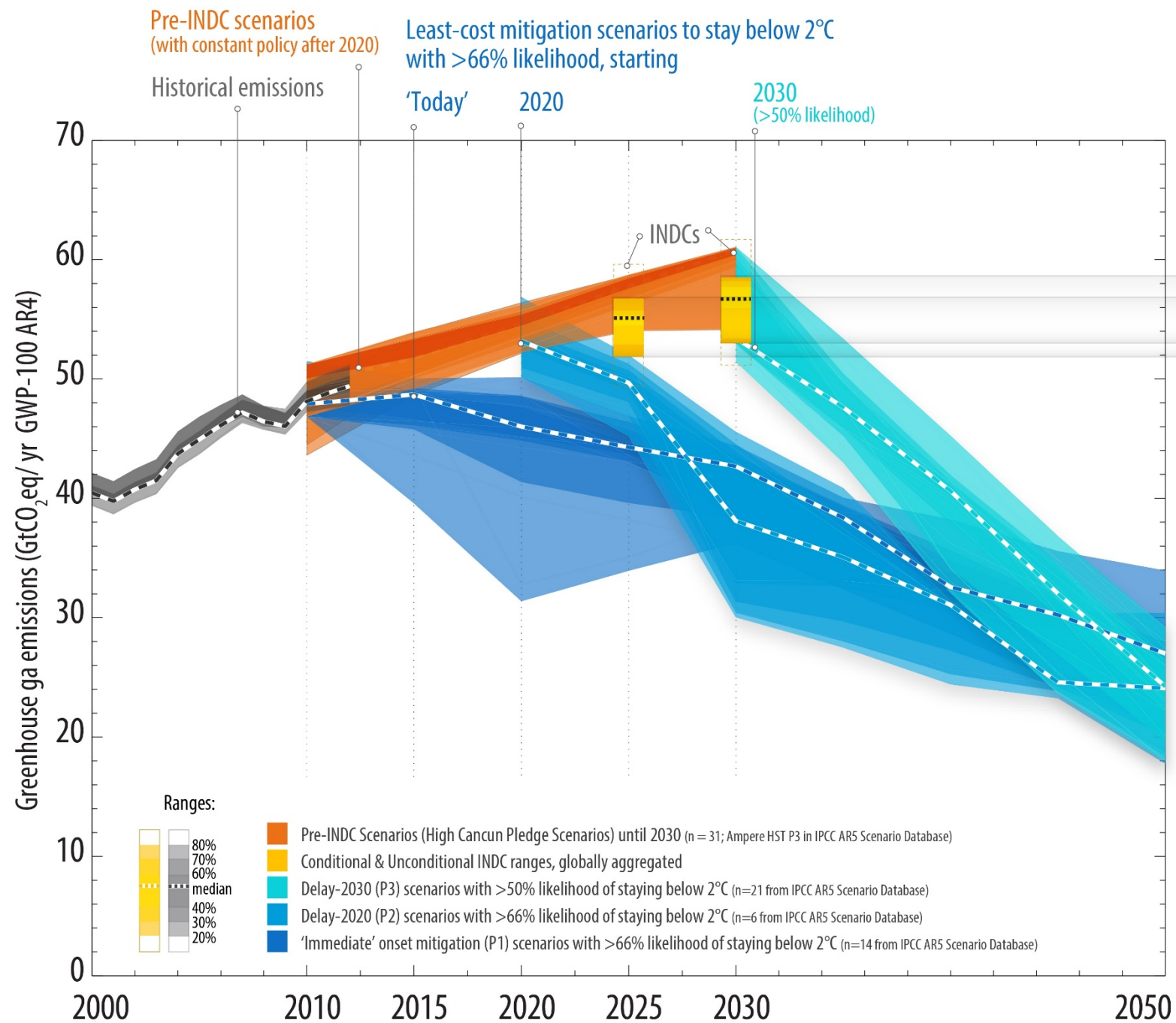
Limiting the warming caused by anthropogenic CO<sub>2</sub> emissions alone with a probability of: -

1. >33%,
2. >50%, and
3. >66%

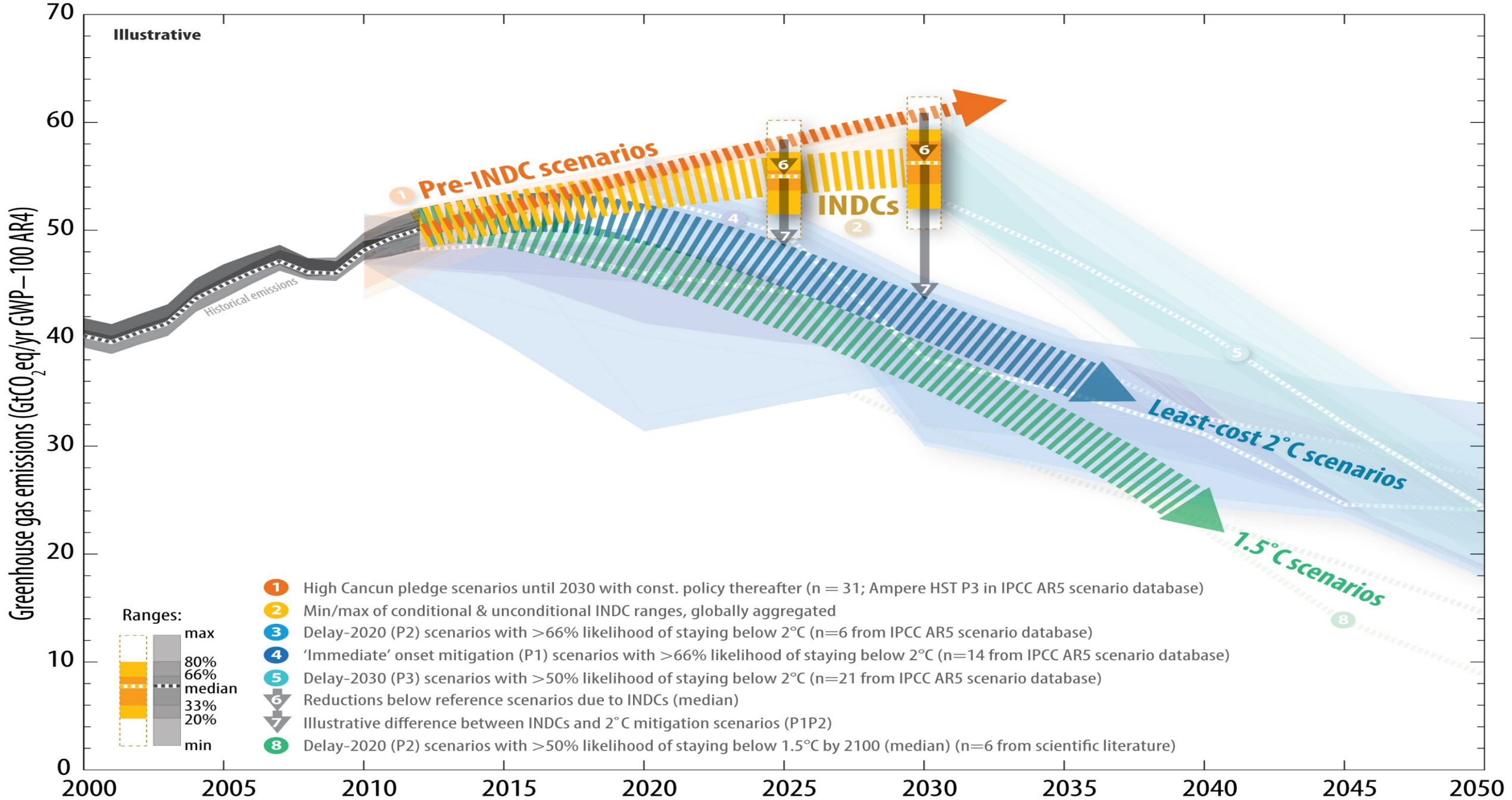
to less than 2°C since the period 1861–1880, will require cumulative CO<sub>2</sub> emissions from all anthropogenic sources to stay between: -

1. 0 and about 1560 Giga-tonnes Carbon [Gt C]
2. 0 and about 1210 Gt C, and
3. 0 and about 1000 Gt C since that period respectively.

An amount of 531 [446 to 616] Gt C, was already emitted by 2011.









# Climate Impacts

- A 2 degree Celsius warming by 2100 would double the land area of 13.6% subject to deadly heat, exposing 48% of the world's population to extreme heat and humidity.
- Robust global differences in temperature means and extremes are expected if global warming reaches 1.5°C versus 2°C above the pre-industrial levels (*high confidence*).
- Temperature means and extremes are also projected to be higher at 2°C compared to 1.5°C in most land regions, with increases being 2–3 times greater than the increase in GMST projected for some regions (*high confidence*).
- The strongest warming of hot extremes is projected to occur in central and eastern North America, central and southern Europe, the Mediterranean region (including southern Europe, northern Africa and the Near East), western and central Asia, and southern Africa (*medium confidence*).
- The number of exceptionally hot days are expected to increase the most in the tropics, where interannual temperature variability is lowest; extreme heatwaves are thus projected to emerge earliest in these regions, and they are expected to already become widespread there at 1.5°C global warming (*high confidence*).

# Three Milestones of International Action to protect the Climate



1992 United Nations Framework Convention on Climate Change,  
UNFCCC

1997 Kyoto Protocol (2005-2012)  
Doha Amendment for the second commitment period (2012-2020)

2015 Paris Climate Agreement

➔ Setting the Law for Global Climate Action post-2020:

➔ **Aims at de-carbonizing the economy**

# The Paris Agreement



- Setting a temperature goal in Art. 2 para. 1 (a):  
'Holding the increase in the global average temperature to well below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 degrees Celsius ...'
- Universal: Most major emitters are participating (187 Parties/UNFCCC: 197)
- Agreement consists of three action pillars: Mitigation, Adaptation, Compensation combined with new oversight mechanisms, robust reporting obligations and increased financial support
- Implementation in line with the so-called 'Paris Rulebook' - developed by the 'CMA'



# Mitigation (Article 4)



- All Parties are legally obliged to **submit NDCs every five years**
- Progression: Successive NDC must reflect highest ambition beyond the previous NDC
- Developed country Parties are expected to take the lead in moving to economy-wide emission reduction targets → source of power for EU law and national law: new GHG emission standards! (Scottish Climate Change Act 2019)
- Developing country Parties must move over time to economy-wide targets → 'built in flexibility'

# Adaptation (Article 7)



- Adaptation becomes second pillar: enhancing adaptive capacity, strengthening resilience and reducing vulnerability
- Parties recognize that higher ambition for mitigation will lower adaptation needs and costs
- Most vulnerable countries for adverse effects of climate change need financial and technological support to enhance adaptive capacities

# Compensation (Article 8)



- Parties recognize compensation as third pillar and self-standing concept
- Loss and damages will occur despite mitigation and adaptation efforts
- Countries suffering loss and damages need to be compensated and technology and financial support must be provided

# Oversight-General



Combining Bottom-up with elements of top-down implementation control:

Bottom-up: Self-perception in relation to NDCs but also stricter reporting obligations

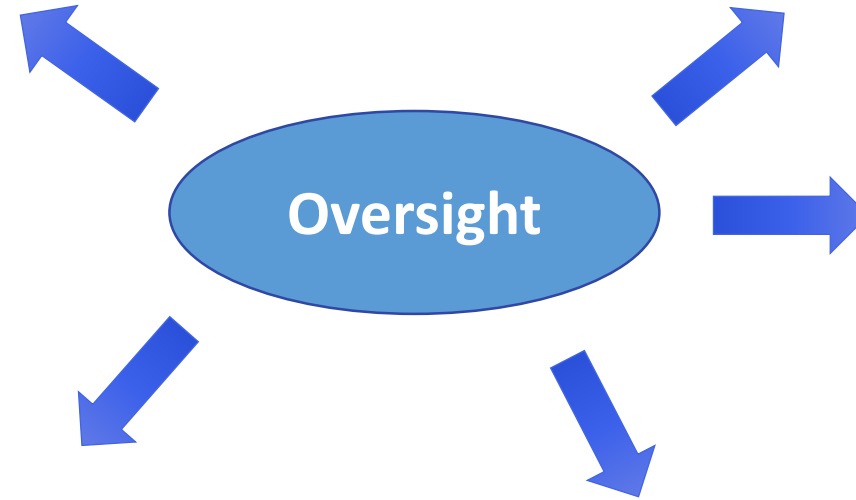
Top-down:

Main element of oversight is the new Global Stocktake Mechanism



**Normative expectation  
of progression**

**Art. 3, Art. 4 para. 2,  
Art. 9 para. 3**



**Global stocktake  
Art. 14**

**Compliance mechanism  
Art. 15**

**Multilateral consideration of progress  
Art. 13 para. 11**

**Expert review:  
GHG Inventory reports  
Art. 13**

# GREENHOUSE GAS EMISSIONS IN THE EU AND THE WORLD



## World air emissions by pollutant (2015)



<0.2% of perfluorocarbons (PFCs), unspecified mix of PFCs and HFCs, sulphur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>)

The percentages do not add up to 100% due to rounded figures being used

Source: UNFCCC Data Interface





## Which gases are covered under the Paris Agreement

- Carbon Dioxide (CO<sub>2</sub>)
- Methane (CH<sub>4</sub>)
- Nitrous Oxide (N<sub>2</sub>O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF<sub>6</sub>)
- Nitrogen trifluoride (NF<sub>3</sub>)

# Widening the perspective on international climate action beyond Paris: The 1987 Montreal Protocol on Substances that Deplete the Ozone Layer (Protocol to the 1985 Vienna Convention for the



Originally: Aimed at the reduction of ozone-depleting substances (ODSs)

Down-phasing of ODSs led to the increasing use of long-term substitutes  
– Hydrofluorocarbons (HFCs)

No ozone depleting potential BUT: extremely high global warming potential (GWP)

➔ 1 Kg of HFC-23 produces a climate forcing over one-hundred years  
equivalent to 14.800 kg of CO<sub>2</sub>



# HFCs and the Montreal Protocol's Adjustment Mechanism

- Kigali Amendment 2016 down-phases HFCs
- Adjustment mechanism: involves a unique procedure whereby reduction targets can be tightened in accordance with scientific evidence (and a qualified majority decision)
- Differentiated approach for developed country Parties and developing country Parties



## Amendment to the Basel Convention Controlling transboundary movements of Hazardous Wastes and their disposal

- During the Basel Conference of the Parties, the Basel Convention was amended to include plastic waste in a legally-binding framework which will make global trade in plastic waste more transparent and better regulated – the ‘prior informed consent procedure’ will be applied (including non-Parties)
- At the same time, a new Partnership on Plastic Waste was established to mobilise business, government, academic and civil society resources, interests and expertise to assist in implementing the new measures, to provide a set of practical supports – including tools, best practices, technical and financial assistance.
- Under BAU, **global plastic production** will account for 15% of the global annual 2°C carbon budget by 2050



## Annex II: Net zero CO<sub>2</sub> emissions by 2050

- Under the Paris Agreement, Parties should communicate long-term, low-greenhouse gas emission development strategies which target the middle of the century.
- **66 Parties to the UNFCCC** (including France, Germany, the UK) are developing plans to achieve net zero CO<sub>2</sub> emissions by 2050
- They acknowledge that deep transformation towards net zero CO<sub>2</sub> emissions requires the mobilization of all actors across all segments of society
- Remaining problem is that accounting for GHG emissions does not include **downstream emissions (Oslo Climate Case)** or emissions of consumption (where goods are produced elsewhere and GHG emissions occur outside the country where the product is consumed)



→ *Urgenda II* –The Hague Court of Appeal of 9 October 2018 - ECLI:NL:GHDHA:2018:2610

→ *Gloucester Resources Limited v Minister for Planning* [2019] NSWLEC 7, 8 February 2019

→ *Lluyia v RWE* (Peruvian Farmer case) Az 5 U 15/17 OLG Hamm (pending on appeal)







## Potential Questions – any other question welcome!

- Carbon Majors Report
- The role of climate litigation
- Defining the Duty of Care
- The Paris Rulebook
- Climate change and causal explanations in law